IN THE CLAIMS:

Please add new Claims 23-27, as follows.

1. (Previously Presented) A diffractive optical element, comprising:

a diffractive grating portion having a pair of diffractive gratings, said pair of diffractive gratings differing in both grating thickness and dispersion from each other, and said pair of diffractive gratings confronting each other through a space of a refractive index of 1,

wherein a maximum optical path length difference occurring in said diffractive grating portion with respect to each of at least two wavelengths is m (integer) times the wavelength, and values of m in the two wavelengths are the same.

2. (Previously Presented) A diffractive optical element, comprising:

a diffractive grating portion having a pair of diffractive gratings, said pair of diffractive gratings differing in both grating thickness and dispersion from each other, and said pair of diffractive gratings confronting each other through a space of a refractive index of 1,

wherein a maximum optical path length difference occurring in said diffractive grating portion with respect to each of at least two wavelengths is m integer times the wavelength, and values of m in the two wavelengths are the same, and peak portions and valley portions of said pair of diffractive gratings are formed in a chamfered shape.

3. (Canceled)

4. (Previously Presented) A diffractive optical element, comprising:

a diffractive grating portion having a pair of diffractive gratings, said pair of diffractive gratings differing in both grating thickness and dispersion from each other, and said pair of diffractive gratings confronting each other through a space of a refractive index of 1,

wherein a maximum optical path length difference occurring in said diffractive grating portion with respect to each of at least two wavelengths is m (integer) times the wavelength, and values of m in the two wavelengths are the same, and peak portions of said pair of diffractive gratings are formed in a chamfered shape.

5. (Previously Presented) A diffractive optical element, comprising:

a diffractive grating portion having a pair of diffractive gratings, said pair of diffractive gratings differing in both grating thickness and dispersion from each other, and said pair of diffractive gratings confronting each other through a space of a refractive index of 1,

wherein a maximum optical path length difference occurring in said diffractive grating portion with respect to each of at least two wavelengths is m (integer) times the wavelength, and values of m in the two wavelengths are the same, and valley portions of said pair of diffractive gratings are formed in a chamfered shape.

6-8. (Canceled)

9. (Previously Presented) A diffractive optical element, comprising:

a diffractive grating portion having a pair of diffractive gratings, said pair of diffractive gratings differing in both grating thickness and dispersion from each other, and said pair of diffractive gratings confronting each other through a space of a refractive index of 1,

wherein a maximum optical path length difference occurring in said diffractive grating portion with respect to each of at least two wavelengths is m (integer) times the wavelength, and values of m in the two wavelengths are the same, peak portions of one of said pair of diffractive gratings are formed in a chamfered shape, and valley portions of the other of said pair of diffractive gratings are formed in a chamfered shape.

10. (Canceled)

11. (Canceled)

12. (Previously Presented) A blazed type diffractive optical element, comprising:

a diffractive grating portion having a pair of diffractive gratings, said pair of diffractive gratings differing in both grating thickness and dispersion from each other, and said pair of diffractive gratings confronting each other through a space of a refractive index of 1,

wherein a maximum optical path length difference occurring in said diffractive grating portion light passing through said pair of diffractive gratings with respect to each of at least two wavelengths is m (integer) times the wavelength, and values of m in the two wavelengths are the same.

13. (Previously Presented) An optical system, comprising:

a diffractive optical element according to one of claims 1, 2, 4, 5, 9 and 12; and

a lens system.

14. (Previously Presented) An optical system according to claim 13, wherein each of said at least two wavelengths are within a visible range.

15. (Previously Presented) An optical system according to claim 13, wherein one of said pair of diffraction gratings is made of resin.

16. (Previously Presented) An optical system according to claim 13, wherein each of said pair of diffraction gratings are made of resin.

17. (Previously Presented) An optical system according to claim 13, wherein said optical element corrects chromatic aberration in said lens system.

18. (Previously Presented) An optical system, comprising: a diffractive optical element according to any one of claims 2, 4, 5 and 9; and

a lens system,

wherein said portions forming the chamfered shape are each formed as a flat surface, and a length a of said flat surface in a direction of grating arrangement of each diffractive grating is $0.5\ \mu m < a < 2\ \mu m$.

19. (Previously Presented) An optical system, comprising:

a diffractive optical element according to any one of claims 2, 4, 5 and 9; and

a lens system,

wherein said portions forming the chamfered shape are each formed as a curved surface, and a radius of curvature r of said curved surface on a cross sectional plane including a direction of grating arrangement of each diffractive grating is $0.5\ \mu m < r < 2\ \mu m$.

20. (Previously Presented) A diffractive optical element, comprising:

a diffractive grating portion having two diffractive grating layers laminated with a space layer of a refractive index of 1, said two diffractive grating layers differing in dispersion from each other, and each diffractive grating provided on said two diffractive grating layers differs in grating thickness,

wherein a maximum optical path length difference occurring in said diffractive grating portion with respect to at least two wavelengths is m (integer) times the wavelength, and values of m in the two wavelengths are the same.

21. (Previously Presented) A diffractive optical element, comprising:

a diffractive grating portion having two diffractive grating layers laminated with a space layer of a refractive index of 1, said two diffractive grating layers differing in dispersion from each other, and each diffractive grating provided on said two diffractive grating layers differs in grating thickness,

wherein said diffractive grating portion is formed on a light transmitting surface of a lens.

22. (Previously Presented) A diffractive optical element, comprising:

a diffractive grating portion having two diffractive grating layers laminated with a space layer of a refractive index of 1, said two diffractive grating layers differing in dispersion from each other, and each diffractive grating provided on said two diffractive grating layers differs in grating thickness,

wherein said diffractive grating portion is formed on a light transmitting surface of a lens, and a maximum optical path length difference occurring in said diffractive grating portion with respect to at least two wavelengths is m (integer) times the wavelength, and values of m in the two wavelengths are the same.

23. (New) A diffractive optical element, comprising:

a diffractive grating portion having a pair of diffractive gratings, said pair of diffractive gratings differing in both grating thickness and dispersion from each other, and said pair of diffractive gratings confronting each other through a space of a refractive index of 1,

wherein a maximum optical path length difference occurring in said diffractive grating portion with respect to each of at least two wavelengths is m (integer) times the wavelength, and values of m in the two wavelengths are the same; and

wherein, for one diffractive grating of said pair of diffractive gratings, nd =1.525 and vd = 47.8, and for the other diffractive grating of said pair of diffractive gratings, nd = 1.635 and vd = 23.0.

24. (New) A diffractive optical element according to claim 23, wherein the grating pitch is 70 μm.

25. (New) A diffractive optical element, comprising:

a diffractive grating portion having a pair of diffractive gratings, said pair of diffractive gratings differing in both grating thickness and dispersion from each other, and said pair of diffractive gratings confronting each other through a space of a refractive index of 1,

wherein a maximum optical path length difference occurring in said diffractive grating portion with respect to each of at least two wavelengths is m (integer) times the wavelength, and values of m in the two wavelengths are the same, and

wherein said pair of diffractive gratings are circularly arranged, and the pitch of the diffractive gratings decreases in a direction from the center toward the margins of the circular arrangement.

26. (New) A diffractive optical element according to claim 25, wherein each of said pair of diffractive gratings has chamfered edges, with said chamfered edges becoming more acute as the grating pitch increases.

27. (New) An optical system comprising:

a diffractive optical element, comprising a diffractive grating portion having a pair of diffractive gratings, said pair of diffractive gratings differing in both grating thickness and dispersion from each other, and said pair of diffractive gratings confronting each other through a space of a refractive index of 1, wherein a maximum optical path length difference occurring in said diffractive grating portion with respect to each of at least two wavelengths is m (integer) times the wavelength, and values of m in the two wavelengths are the same; and

a diaphragm,

wherein the diffractive optical element and diaphragm are arranged along an optical path with no optical elements arranged therebetween, and the diaphragm is positioned on the object side of the diffractive optical element.